

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FUD128P738WO	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/DE02/01076	International filing date (<i>day/month/year</i>) 21 March 2002 (21.03.02)	Priority date (<i>day/month/year</i>) 21 March 2001 (21.03.01)
International Patent Classification (IPC) or national classification and IPC H04B 1/38		
Applicant FUNKWERK DABENDORF GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 21 October 2002 (21.10.02)	Date of completion of this report 23 June 2003 (23.06.2003)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE02/01076

I. Basis of the report

1. With regard to the **elements** of the international application:*

- the international application as originally filed
- the description:
 pages _____ 1-9 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____ 1-5 _____, filed with the letter of _____ 30 May 2003 (30.05.2003)
- the drawings:
 pages _____ 1/5-5/5 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages _____
- the claims, Nos. _____
- the drawings, sheets/fig _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

C. file supplemental sheet -

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 02/01076

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 5	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 5	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 5	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: EP-A-1 039 650

D2: US-A-5 881 369.

2. **Novelty:**

a. Document D1 (cf. in particular Figure 1), which is regarded as the closest prior art, discloses

- a circuit arrangement for compensation of attenuation in an antenna feed cable, said circuit arrangement comprising a circuit part which is suitable for operation in a first frequency band with two frequency ranges of HF signals which are always different for transmission and reception, said circuit arrangement also comprising at least one transmission branch provided with a power amplifier and a reception branch provided with a receiver amplifier.

The subject matter of **Claim 1** differs essentially from the prior art disclosed in D1 in that

- (i) the switch units of external signal switches each comprise a frequency separating filter;

- (ii) both signal branches comprise "broadband" power amplifiers;
 - (iii) the circuit part is configured in such a way that the HF signals can be transmitted alternatively in either the higher or the lower of the two frequency ranges located in the frequency band processed by the circuit part;
 - (iv) HF signals with a frequency solely within the frequency range used for transmission in the context of the currently established telecommunications connection are routed through the power amplifier of the circuit part.
- (c). The subject matter of **Claim 1** is therefore novel (PCT Article 33(2)).

2. **Inventive step**

a. The problem to be solved by the present invention is therefore understood to be that of
- extending the flexibility of the D1 arrangement.

b. Document D2 (cf. in particular, column 4, line 15, to column 5, line 20, and Figure 1) informs a person skilled in the art of the possibility of using alternatively either the lower or the upper frequency range of a frequency band for transmission or reception, feature (iii). In the attempt, motivated by this information, to modify the D1 arrangement accordingly, the use of "broadband" amplifiers, feature (ii), is obvious to a person skilled in the art. However, because of the different structure of the arrangements of D1 and D2, a modification of this kind does not obviously lead to the use of a frequency separating filter in each case or to routing through the power amplifier only HF signals

whose frequency lies within the frequency ranges used for transmission, features (i) and (iv).

c. The solution to this problem as proposed in **Claim 1** therefore involves an inventive step (PCT Article 33(3)).

d. **Claims 2 to 5** are dependent on Claim 1 and therefore likewise meet the requirements of the PCT with regard to novelty and inventive step.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: I. 6

Box I**Basis of the report**

Claim 1 is based on the original Claim 1 and on page 7, lines 13 to 21 (only reception in the base state), page 2, lines 27 to 33 ("alternatively" in one of the two frequency bands) and Figures 4 and 5 ("solely" within the frequency range used).